	Type	L #	Hits	Search Text	DBs	Time Stamp
1	IS&R	L10	467	(438/108).CCLS.	USPAT	2002/12/26 14:28
2	IS&R	L20	312	(257/796).CCLS.	USPAT	2002/12/26 14:33
3	IS&R	L21	396	(438/122).CCLS.	USPAT	2002/12/26 14:39
4	IS&R	L22	376	(438/121).CCLS.	USPAT	2002/12/26 14:43
5	BRS	L24	57	grease same (IC adj chip)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/12/26 15:01
6	IS&R	L25	386	(257/687).CCLS.	USPAT	2002/12/26 15:15
7	IS&R	L27	713	(257/686).CCLS.	USPAT	2002/12/26 15:30
8	IS&R	L26	531	(257/718).CCLS.	USPAT	2002/12/26 15:56
9	IS&R	L29	932	(257/712).CCLS.	USPAT	2002/12/26 16:40
10	IS&R	L30	544	(257/714).CCLS.	USPAT	2002/12/26 17:00
11	IS&R	L31	281	(257/720).CCLS.	USPAT	2002/12/26 17:27
12	IS&R	L32	224	(257/685).CCLS.	USPAT	2002/12/26 17:33

CLIPPEDIMAGE= JP02000323631A

PAT-NO: JP02000323631A

DOCUMENT-IDENTIFIER: JP 2000323631 A

TITLE: MOUNTING STRUCTURE FOR IC CHIP SUBSTRATE

PUBN-DATE: November 24, 2000

INVENTOR-INFORMATION:

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ASSIGNEE-INFORMATION:

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APPL-NO: JP11131134

APPL-DATE: May 12, 1999

INT-CL (IPC): H01L023/36

ABSTRACT:

PROBLEM TO BE SOLVED: To reduce the number of assembly parts of an IC chip substrate, and to mount this IC chip substrate on a heat sink in a compact constitution.

SOLUTION: A heat conductive grease layer 28 is formed between a substrate 26 on which an IC chip 22 is mounted and a heat sink 40, and the substrate 26 is mounted on the heat sink 40 with a spring 30 constituted of a spiral release edge 34 butted to the substrate for pressurizing the substrate 26 to the heat sink 40 and as cantilever part 32 mounted and fixed to the heat sink 40. The

point of the spiral shape so that, even when the substrate 26 is thermally deformed, the substrate 26 can be continuously pressurized following the deformation. As a result, the IC chip substrate can be mounted on the heat sink in a simple constitution.

PAT-NO: EP000786806A1

DOCUMENT-IDENTIFIER: EP 786806 A1

TITLE: High I/O density package for high power wire-bonded IC chips and method
for making the same

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<CHG DATE=19970826 STATUS=O> According to the present invention, there are
described a novel cavity-up package (30) having efficient heat dissipation
capabilities well adapted to high power wire-bonded IC chips (33) and a method
for making the same. The **IC chip** (33) is mounted in a cavity (32) of a
cavity-up substrate (31) with its active surface turned upside. The fragile
bonding wires (35) which interconnect the contact pads (36) at the periphery of
the **IC chip** and metal lands of the substrate are encapsulated at contact pad
locations with a protective material. There is formed a ring-shaped stiffener
(38) that delineates a recess (39) substantially exposing the whole **IC chip**
active surface (where heat is produced). Then, the recess is filled with an
adequate quantity of thermal **grease** to form a layer (40). Finally, a cap (41)
having a mesa-shaped pedestal (42) fitting with said recess is firmly affixed
onto the substrate so that the pedestal squeezes the **grease** down to the desired
thickness for excellent heat transfer between the **IC chip** active surface and
the cap. Optionally, a heat sink (43) can be bonded to the cap to still

footprint) of the cavity-up packaging technique without its inconveniences (low heat dissipation). In particular, it offers a very efficient heat dissipation scheme to high power wire-bonded semiconductor IC chips without damaging the fragile bonding wires. The method is also applicable to flat packages as well and moreover can be extended to MCM packages. <IMAGE>

CLIPPEDIMAGE= JP02001168562A

PAT-NO: JP02001168562A

DOCUMENT-IDENTIFIER: JP 2001168562 A

TITLE: COOLING DEVICE OF CIRCUIT MODULE, AND ELECTRONIC EQUIPMENT THEREWITH

PUBN-DATE: June 22, 2001

INVENTOR-INFORMATION:

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APPL-NO: JP11353174

APPL-DATE: December 13, 1999

INT-CL (IPC): H05K007/20;G06F001/20 ;H01L023/40

ABSTRACT:

PROBLEM TO BE SOLVED: To obtain the cooling device of a circuit module for reducing stress being applied to the connection part between an IC chip and a circuit board and at the same time allowing the heat of the IC chip from escaping to a heat sink efficiently.

SOLUTION: The cooling device is provided with a heat sink 36 that is overlapped on to a semiconductor package 26. The heat sink is provided with a heat reception part 38 for receiving the heat of an IC chip 28 that is electrically connected to a circuit board 22 made of synthetic resin, and a flexible heat

pressed toward the
IC chip via a fixing spring 44, thus thermally connecting the heat reception
part and the IC chip via a heat transfer member. A spacer 50 for supporting
the heat sink at a position deviating from the IC chip is included between the
circuit board and the heat sink.